An Audit of Haematology/Oncology Clinic Services at an Urban Academic Hospital in Jamaica

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ABSTRACT

Objective: *To determine the range of disorders seen at the Haematology/Oncology Clinic of the University Hospital of the West Indies (UHWI).*
Methods: *A retrospective chart review for patients referred to the clinic during the two-year period 2006 to 2007 was conducted. A standardized data extraction template was used to record patient demographics (age, gender, residence) and diagnosis (grouped as benign or malignant haematological disorders and solid tumours). Univariate analyses were used to provide descriptive summary statistics.*
Results: *Of the 626 new patients seen during the study period, 395 charts were retrievable. Most clinic attendees were female (73%); 51% resided in Kingston and St Andrew and 32% in St Catherine. Median age was 52 (range 2–96) years.*
Malignant disorders comprised 62% of referrals; solid tumours (cancers) accounted for 85% of these. The most prevalent cancers were breast (70%), colorectal (17%) and gastric (5%). Prostate cancer accounted for 1% of cases. The malignant or pre-malignant haematological disorders seen were: non-Hodgkin's lymphoma (9), multiple myeloma/plasma cell dyscrasias (9), Hodgkin's lymphoma (6), chronic leukaemia (6), acute leukaemia (2) and myeloproliferative disorders (1). The benign haematological disorders were anaemia (56%), platelet disorders (18%), leucocyte disorders (16%) and disorders of coagulation and haemostasis (11%).
Conclusions: *The care of cancer patients comprised over 60% of the clinic workload. The most prevalent cancer was breast cancer. Prostate cancer was under-represented, attributable to cross-specialty referral patterns. Expansion of cancer care and supportive services are recommended to address the needs of the cancer patient population.*

Keywords: Cancer, clinic audit, haematology/oncology

Una auditoría a los servicios de la Clínica de Haematología y Oncología en un Hospital Académico Urbano en Jamaica

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RESUMEN

Objetivo: *Determinar el rango de trastornos vistos en la Clínica de Hematología y Oncología del Hospital Universitario de West Indies (HUWI), y la proporción de remisiones de Oncología a la clínica.*
Métodos: *Se realizó una revisión retrospectiva de la historia clínica a pacientes remitidos a la clínica durante el período de dos años, 2006 y 2007. Se utilizó una planilla estandarizada de extracción de datos para registrar datos demográficos de paciente (edad, género, residencia) y diagnóstico (agrupados como trastornos hematológicos benignos o malignos y tumoures sólidos). Se usaron análisis univariados para proporcionar las estadísticas descriptivas de resumen.*
Resultados: *De los 626 nuevos pacientes vistos durante el periodo de estudio, 395 historias clínicas fueron recuperables. La mayoría de las personas que asistían a la clínica eran mujeres (73%); 51% residía en Kingston y St Andrew y 32% en St Catherine. La edad promedio fue 52 años (rango 2-96). Los trastornos malignos comprendieron 62% de las remisiones; los tumoures sólidos (cáncer) representaron 85% de estos. Los cánceres más frecuentes fueron el cáncer de mama (70%), colon (17%) y gástrico (5%).*

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El cáncer de próstata representó 1% de los casos. Los desórdenes hematológicos malignos o premalignos vistos fueron: el linfoma no hodgkiniano (9), mieloma múltiple o discrasias de células plasmáticas (9), enfermedad de Hodgkin (6), leucemia crónica (6), leucemia aguda (2), y trastornos mieloproliferativos (1). Los trastornos hematológicos benignos fueron: anemia (56%), trastornos de plaquetas (18%), trastornos de leucocitos (16%), y trastornos de la coagulación y hemostasia (11%).
Conclusiones: *El cuidado de pacientes con cáncer abarcó más del 60% de la carga de trabajo de la clínica. El cáncer más frecuente fue el cáncer de mama. El cáncer de próstata estuvo subrepresentado, atribuible a los patrones de remisión entre especialidades. Se recomienda la expansión del tratamiento del cáncer y los servicios de apoyo para tratar las necesidades de la población de pacientes de cáncer.*

Palabras claves: Cáncer, auditoría clínica, hematología/oncología

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INTRODUCTION

The University Hospital of the West Indies (UHWI) is a tertiary care hospital in Kingston, Jamaica, offering specialist clinical services including General Surgery and sub-specialties, Internal Medicine and sub-specialties, Anaesthetics and Intensive Care, Obstetrics and Gynaecology and Paediatrics. Haematology and Oncology services have been available at the UHWI for more than three decades.

The Haematology/Oncology Clinic at the UHWI is a specialist referral centre to which patients with a wide range of cancers and benign Haematological disorders are referred for assessment and management. As the UHWI is the academic hospital associated with The University of the West Indies, the clinic serves as a clinical training unit for post-graduate trainees in Haematology/Oncology and other medical staff. This audit seeks to determine the range and respective proportions of cancers and haematological disorders referred to the clinic. As cancer prevalence increases worldwide (1), especially in resource constrained countries such as Jamaica, it will become increasingly relevant to direct the best allocation of limited resources in a tertiary care setting, in order to meet the needs of specific patient populations.

SUBJECTS AND METHODS

After approval of The University Hospital of the West Indies, The University of the West Indies, Faculty of Medical Sciences Ethics Committee, a list of new patients referred for consultation at the Haematology/Oncology Clinic, UHWI, during the two-year period, 2006 to 2007 was obtained from the Medical Records Department, and a manual search conducted for their medical charts. Data extraction was performed using a standardized data extraction template. The items recorded were: patients' gender, age, parish of residence, source of referral and diagnosis. Diagnosis was grouped as benign haematological disorders, malignant haematological disorders or solid tumours (cancers). Based on the descriptive nature of the study, univariate analyses with descriptive summary statistics are presented. Statistical tests were performed with the Statistical Package for Social Scientists® v 12.0.

RESULTS

There were 626 new clinic bookings during the two-year study period. We were able to retrieve medical records for 395 of these patients, for a docket retrieval rate of 63%. The characteristics of clinic attendees are summarized in Table 1.

Table 1: Characteristics of patients seen in the Haematology/Oncology Clinic

Characteristic	
Gender	**No (%)**
Male	107 (27.2)
Female	286 (72.8)
Median age, years (range)	52 (2–96)
Parish of residence	**No (%)**
KSA	200 (51.2)
St Thomas	14 (3.6)
Portland	7 (1.8)
St Mary	8 (2.0)
St Ann	12 (3.1)
Trelawny	2 (0.5)
St James	4 (1.0)
Hanover	1 (0.3)
St Elizabeth	4 (1.0)
Manchester	4 (1.0)
Clarendon	12 (3.1)
St Catherine	123 (31.5)
Source of referral	**No (%)**
GP	63 (24.4)
Private surgeon	6 (2.3)
A&E or casualty	23 (8.9)
Medical clinic	3 (1.2)
Surgery clinic	140 (54.3)
Gynae clinic	12 (4.7)
Inpatient (referred on ward)	11 (4.3)

KSA: Kingston and St Andrew; GP: general practitioners

The majority (73%) of patients were female and the median patient age was 52 (range 2–96, IQR 28). Most patients resided in the Kingston and St Andrew area, however, almost one-third were from St Catherine. Referrals were mainly from the UHWI surgical clinics (54%) and general practitioners

(24%). The majority (62%) of referrals was for management of malignant disorders while 38% of patients were seen for evaluation of benign haematological disorders (Table 2), including anaemia (56%), platelet disorders (18%), leucocyte disorders (16%) and disorders of coagulation and haemostasis (11%). Of the patients referred with malignancies, the majority (85%) had solid tumours, while the remainder had pre-malignant or malignant haematological disorders as follows: non-Hodgkin's lymphoma (9), multiple myeloma and plasma cell dyscrasias (9), Hodgkin's lymphoma (6), chronic leukaemia (6), acute leukaemia (2) and myeloproliferative disorders (1).

Table 2: Diagnosis type for all new Haematology/Oncology clinic patients

Diagnosis	Frequency	Per cent
Benign haematological disorder	149	38.1
Pre-malignant or malignant haematological disorder	36	9.2
Acute leukaemias	2	
Chronic leukaemias	6	
Myeloproliferative disorders	1	
NHL-non Hodgkin's lymphoma	9	
Hodgkin's lymphoma	6	
Multiple myeloma and plasma cell dyscrasias	9	
Other	3	
Solid tumour	206	52.7
Total no	**391**	**100**

The most common cancer presenting to the clinic was breast cancer, accounting for 68% of all cancers seen (Table 3); colorectal and gastric cancers accounted for 17% and 5%, respectively.

Table 3: Cancer diagnoses (tumour sites) for new clinic patients

Diagnosis	Frequency (% of 177)
Breast cancer	121(68.4)
Colorectal cancer	30 (16.9)
Gastric cancer	8 (4.5)
Head and neck cancer	2 (1.1)
Prostate cancer	2 (1.1)
GIST	2 (1.1)
Soft-tissue sarcoma	2 (1.1)
Cervical cancer	1 (0.6)
Anal cancer	1 (0.6)
Gallbladder cancer	1 (0.6)
Cholangiocarcinoma	1 (0.6)
Bladder cancer	1 (0.6)
Renal cancer	1 (0.6)
Osteosarcoma	1 (0.6)
Thyroid cancer	1 (0.6)
Cancer of unknown primary	2 (1.1)

GIST: gastrointestinal stromal tumour

DISCUSSION

This audit showed that patients with cancer comprise 62% of the clinic workload. As the prevalence of cancer increases worldwide (1), the contribution of cancer patients to the overall clinic workload can be expected to increase. Infrastructural and human resources must therefore be optimized to meet the needs of the cancer patient population.

This study showed the wide age-range of clinic attendees (2–96 years) to our clinic. At the time of this study, the clinic staff included physicians (5 Consultant Haematologists/Oncologists and several trainees, numbers varying according to rotations and other duties) and 1–2 registered nurses. Subsequent to this audit, a Paediatric Haematologist/Oncologist has joined the regular clinic staff. This is important as treatment related late-effects among other issues merit special attention in the paediatric cancer population.

One finding of this study was that although most patients were from geographically close areas, other patients travelled from all parishes in the island to receive care in the clinic. It is our experience that many patients with cancer who require multiple clinic visits and visits for chemotherapy (which may be weekly with some regimens) find it logistically difficult to be compliant with the recommended care. This is multi-factorial, with some contributory factors including, high transportation costs to travel long-distances and the inconvenience of long travel times, especially for those who are very ill and frail. Decentralization of care is recommended as a solution to this problem. This will require training of Oncologists and investment in infrastructure to allow Island-wide availability of cancer care services. In the interim, providing management guidelines for treating physicians within the patient's geographic locale may be helpful in decreasing the need for frequent visits to a distant site. Technological advances such as virtual case discussions (2) can help local physicians manage patients closer to home.

There was disparity between the highest incidence of cancers in Jamaica (3) and our findings; respective rankings are demonstrated in Table 4.

Table 4: Leading cancer sites in Jamaica (KSA, 2003−2007) and for Haematology/Oncology clinic (UHWI, 2006−2007)

Rank	UHWI (study)	KSA (2003−2007)
1	Breast	Prostate
2	Colon	Breast
3	Stomach	Colon
4	Prostate (also H&N, GIST, sarcoma)	Lung

UHWI: The University Hospital of the West Indies; KSA: Kingston and St Andrew; GIST: gastrointestinal stromal tumour

Breast cancer is the most common cancer in Jamaican women, and is second to prostate cancer as the most common cancer overall. While breast cancer was the cancer most commonly seen in our clinic, prostate cancer accounted for only 2% of cancer cases. This can be explained by local referral patterns whereby prostate cancer is managed in the Urology Clinic, with few patients being referred to the Oncology Clinic, usually very late in the course of the disease. As more medical options become available for the treatment of advanced prostate cancer, this may change (4). Lung cancer is the fourth most common cancer in Jamaica, however, was infrequently

seen in the clinic. This is likely due to the proximity of a specialist hospital dedicated to thoracic disorders, including lung cancer. The limited exposure to lung cancer management may have an impact on specialty training; trainee rotation at an external lung cancer clinic should be considered to address this.

Oncology nursing care has evolved over the years, with Oncology nurses focussing on patient assessment, education, and care and coordinating interdisciplinary care, symptom management and supportive care (5). As cancer treatments improve, long-term survivorship has become a realistic expectation for many. In 2013, the majority of cancer survivors (64%) were diagnosed five or more years previously (6). As patients live longer, nurses play an even greater role in rehabilitation, patient education, customized rehabilitation programmes, and individual patient needs related to bowel and bladder continence, skin care, nutrition, physical therapy and other activities (5). Specialized training in oncology nursing is recommended as a priority.

A significant number of cancer patients will receive Chemotherapy. The infrastructural and nursing capacity of the Chemotherapy unit at the UHWI will need to be increased to allow timely treatment of patients. In addition to chemotherapy drugs, many cancer patients require other supportive medications, including: anti-emetics, opioid and non-opioid analgesics and growth-factor support. Pharmacists can play a vital role in supportive care management of cancer patients, providing the necessary knowledge and education about medications used (7). A recent study (8) demonstrated that the use of a pharmacist-led interdisciplinary team produced and maintained an improvement in symptom scores in patients receiving oncology services including: gynaecologic, radiation, medical and surgical. Therefore, involvement of the pharmacist in the cancer care-team is encouraged.

Malnutrition is a common problem in cancer patients that has been recognized as an important component of adverse outcomes, including increased morbidity and mortality and decreased quality of life (9). Nutritional support services involving a nutritionist will help patients cope with this problem.

In our clinic, palliative care is currently integrated into patient management and provided by the treating physician. The American Society of Clinical Oncology has stated that an interdisciplinary team is required to provide the skills essential for effective palliative cancer care and to share the workload (10). Use of a team approach will have increasing importance as the shortage of oncologists grows as 2020 approaches (11, 12). Palliative care needs to be available to patients and families in all settings where they receive care, including: outpatient clinics, acute and long-term care facilities and private homes (10). In order to achieve these goals, a palliative care-team is recommended for the Haematology/Oncology Clinic service. There is a need for cancer services to help patients navigate their cancer journey, and provide support and education. The team should include: oncology nurses, pharmacists, nutritionists, palliative care and psychosocial specialists. Involving allied healthcare professionals as part of the multi-disciplinary team approach is recommended to meet the needs of our cancer patients, in order to improve their quality of life, as efforts are made to optimize their treatment and improve their survival.

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